IN THE CLAIMS

1 (Previously Presented). A method, comprising:

determining a sum of absolute differences between pixel values from a reference block of a first frame and a corresponding values from a second frame in a search window;

identifying a macroblock in the second frame with the lowest sum of absolute differences;

using less than all the bits of the pixel values to determine the sum of absolute differences to reduce the size of circuitry needed to perform the sum of absolute differences determination; and

adding an offset value to said reference macro block's uncompressed video data value and said search window macro block's uncompressed video data value.

2 (Previously Presented). The method of claim 23 wherein said first frame is a current frame and said second frame is previous frame.

3 (Previously Presented). The method of claim 23 further comprising loading said reference macro block's data values into a register prior to said taking.

Claim 4 (Canceled).

5 (Previously Presented). The method of claim 3 further comprising loading said search window's data values into a random access memory prior to said taking the absolute difference.

6 (Previously Presented). The method of claim 5 wherein said reference macro block's data values are uncompressed when said loaded ad said search window's data values are uncompressed when said loaded.

7 (Previously Presented). The method of claim 23 further comprising determining which N bits from:

1) said reference macro block's data value's M bits; and

2) said search window macro block's data value's M bits

are to be used for said taking the absolute difference.

8 (Original). The method of claim 7 wherein said determining comprises:

determining the number of most significant bits that are to be masked from both said data values;

determining the number of least significant bits that are to be masked from both said data values.

9 (Previously Presented). The method of claim 8 wherein said determining the number of least significant bits is (M-N) – (said determined number of most significant bits).

10 (Original). The method of claim 9 wherein said determining the number of most significant bits further comprises calculating $\log_2|2^M/\text{MaxValue}|$ were MaxValue is the maximum uncompressed video data value of said reference macro block.

Claim 11 (Canceled).

12 (Currently Amended). The method of claim [[11]] 1 wherein said offset is set equal to a minimum valued uncompressed video data value of said reference macro block.

13 (Previously Presented). The apparatus of claim 26 further comprising:

logic circuitry to take an absolute difference between data values of macro blocks by masking a number of most significant bits of said data values; and

a circuit to perform a calculation to determine the number of most significant bits to mask.

14 (Previously Presented). The apparatus of claim 24 further comprising additional logic circuitry to determine an offset to be added to:

1) said reference macro block's uncompressed video data value; and

2) said search window macro block's uncompressed video data value.

15 (Original). The apparatus of claim 14 further comprising a first adder having a first input to receive said reference macro block's uncompressed video data value and a second input coupled to said additional circuitry to receive said offset, said adder having an output that flows toward said logic circuitry.

16 (Original). The apparatus of claim 14 further comprising a second adder having a first input to receive said search window macro block's uncompressed video data value and a second input coupled to said additional circuitry to receive said offset, said adder having an output that flows toward said logic circuitry.

17 (Previously Presented). The apparatus of claim 24 wherein said logic circuitry is also to:

determine the number of most significant bits that are to be masked from both said data values; and

determine the number of least significant bits that are to be masked from both said data values.

Claims 18-22 (Canceled).

23 (Previously Presented). The method of claim 25 wherein taking includes:

a) taking the absolute difference of:

1) less than all of the most significant bits of an uncompressed video data value from a reference macro block; and

2) less than all of the most significant bits of an uncompressed video data value from a macro block worth of data within a search window;

b) calculating a sum of absolute differences between corresponding data values within said reference macro block and said macro block worth of data, said absolute difference being one of said absolute differences; and

c) calculating a motion vector based upon the position of said reference macro block in a first frame and the position of said macro block worth of data in said second frame, said sum of absolute differences being a lowest sum of absolute amongst other sums of absolute differences calculated between said reference macro block and other macro blocks worth of data within said search window.

24 (Previously Presented). The apparatus of claim 13, including:

a) said logic circuitry to take an absolute difference between:

1) less than all of the bits of an uncompressed video data value from a reference macro block;

2) less than all of the bits of an uncompressed video data value from a macro block worth of data within a search window;

b) a circuit to calculate a number of most significant bits to mask;

c) a register to store said reference macro block, said register coupled to said logic circuitry; and

d) a random access memory to store said search window, said random access memory coupled to said logic circuitry.

25 (Previously Presented). The method of claim 1 including:

taking an absolute difference between data values of macro blocks by masking a number of most significant bits of said data values; and

calculating the number of most significant bits to mask.

26 (Previously Presented). An apparatus comprising:

logic circuitry to determine a sum of absolute differences between pixel values from a reference block of a first frame and a corresponding values from a second frame in a search window and to add an offset value to said reference macro block's uncompressed video data value and said search window macro block's uncompressed video data value;

a circuit to identify a macroblock in the second frame with the lowest sum of absolute differences; and

said logic circuitry to use less than all the bits of the pixel values to determine the sum of absolute differences to reduce the size of the circuitry needed to perform the sum of absolute differences determination.